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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,230	01/20/2004	Gary Michael Everingham	051481-5143	6453
7590	11/29/2005		EXAMINER	
Siemens Corporation Intellectual Property Department 170 Wood Avenue South Iselin, NJ 08830			FRISTOE JR, JOHN K	
			ART UNIT	PAPER NUMBER
			3751	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/759,230

Applicant(s)

EVERINGHAM ET AL.

Examiner

John K. Fristoe Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/20/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement filed 9/20/2004 is acknowledged by the examiner.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants recite in claim 25 that the valve shaft is “coupled” to the actuator shaft. The use of the term “coupled” within this environment is inaccurate and renders the claim indefinite since the valve shaft is not “coupled” to the actuator shaft. The valve shaft merely abuts the actuator shaft during a portion of the operation of the valve and also the valve shaft does not abut the actuator shaft at all during a portion of the operation of the valve therefore the valve shaft and actuator shaft are not “coupled”

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6, 9, 10, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,680,880 (Miyake et al.). Miyake et al. disclose a method of assembling, operating, and closing an exhaust gas recirculation valve comprising the steps of providing a

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base (1), a fluid conduit (1c), a first port (1a), a second port (1b), a valve member (3), a valve shaft (4) having a first end (lower portion in figure 5) and a second end (top portion in figure 5), mounting a linear actuator (34), a rotary motor (12), a displaceable member (41), wherein the displaceable member (41) contacts the valve shaft (4) to open the valve (col. 7, lines 35-39), wherein the displaceable member's end and the valve shaft are in a spaced relationship (figure 5), a linear spring (11) engaging the valve shaft (via flange 7) that biases the valve member (3), a first flange (7), a valve seat (2), wherein the valve shaft (4) has a longitudinal axis (axis running vertically in figure 5), wherein the rotation axis (vertical axis in figure 5) is parallel to the longitudinal axis, wherein the displaceable member (41) has a disc-shaped member (portion that contacts the valve shaft has a circular face and therefore is the shape of a disc), wherein the spring (11) is between the valve member 93) and the actuator (34), a second flange member (54), and wherein the spring's send end contacts a base (adjacent the lead line for element 11 in figure 5).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,680,880 (Miyake et al.) in view of U.S. Pat. No. 5,941,500 (Lebkuchner). Miyake et al. disclose a method of assembling, operating, and closing an exhaust gas recirculation valve comprising the steps of providing a base (1), a fluid conduit (1c), a first port (1a), a second port

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(1b), a valve member (3), a valve shaft (4) having a first end (lower portion in figure 5) and a second end (top portion in figure 5), mounting a linear actuator (34), a rotary motor (12), a displaceable member (41), wherein the displaceable member (41) contacts the valve shaft (4) to open the valve (col. 7, lines 35-39), wherein the displaceable member's end and the valve shaft are in a spaced relationship (figure 5), a linear spring (11) engaging the valve shaft (via flange 7) that biases the valve member (3), a first flange (7), a valve seat (2), wherein the valve shaft (4) has a longitudinal axis (axis running vertically in figure 5), wherein the rotation axis (vertical axis in figure 5) is parallel to the longitudinal axis, wherein the displaceable member (41) has a disc-shaped member (portion that contacts the valve shaft has a circular face and therefore is the shape of a disc), wherein the spring (11) is between the valve member 93) and the actuator (34), a second flange member (54), and wherein the spring's send end contacts a base (adjacent the lead line for element 11 in figure 5) but lacks providing the second end of the valve shaft being curved. Lebkuchner teaches a method of assembling a valve assembly having a valve shaft (48) and wherein the valve shaft (48) has curved end portion (figure 5), a valve disc member (50), and a valve seat (38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of assembling, operating, and closing an EGR valve having a valve shaft with a flat send end of Miyake et al. by machining the end of the valve shaft into a curve as taught by Lebkuchner in order to operate the valve assembly even if the valve shaft and the displaceable member become askew from each other.

8. Claims 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,680,880 (Miyake et al.) in view of U.S. Pat. No. 6,484,704 (Cook et al.). Miyake et al. disclose a method of assembling, operating, and closing an exhaust gas recirculation valve

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comprising the steps of providing a base (1), a fluid conduit (1c), a first port (1a), a second port (1b), a valve member (3), a valve shaft (4) having a first end (lower portion in figure 5) and a second end (top portion in figure 5), mounting a linear actuator (34), a rotary motor (12), a displaceable member (41), wherein the displaceable member (41) contacts the valve shaft (4) to open the valve (col. 7, lines 35-39), wherein the displaceable member's end and the valve shaft are in a spaced relationship (figure 5), a linear spring (11) engaging the valve shaft (via flange 7) that biases the valve member (3), a first flange (7), a valve seat (2), wherein the valve shaft (4) has a longitudinal axis (axis running vertically in figure 5), wherein the rotation axis (vertical axis in figure 5) is parallel to the longitudinal axis, wherein the displaceable member (41) has a disc-shaped member (portion that contacts the valve shaft has a circular face and therefore is the shape of a disc), wherein the spring (11) is between the valve member (3) and the actuator (34), a second flange member (54), and wherein the spring's second end contacts a base (adjacent the lead line for element 11 in figure 5) but lacks the method step of closing the valve in the event of a power failure. Cook et al. disclose a method of operating a rotary valve member comprising the step of closing the valve upon the event of a power failure (col. 3, lines 41-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of operating, closing and assembling a valve assembly of Miyake et al. by closing the valve upon a failure of power as taught by Cook et al. in order to avoid catastrophic damage downstream of the valve assembly.

9. Claims 16-21, 23, 24, 25 as far as it is definite, and 26 are rejected under 35

U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,680,880 (Miyake et al.) in view of U.S. Pat. No. 6,484,704 (Cook et al.) as applied to claims 15 and 22 above, and further in view of

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U.S. Pat. No. 5,941,500 (Lebkuchner). Miyake et al. modified above, disclose a method of assembling, operating, and closing an exhaust gas recirculation valve comprising the steps of providing a base (1), a fluid conduit (1c), a first port (1a), a second port (1b), a valve member (3), a valve shaft (4) having a first end (lower portion in figure 5) and a second end (top portion in figure 5), mounting a linear actuator (34), a rotary motor (12), a displaceable member (41), wherein the displaceable member (41) contacts the valve shaft (4) to open the valve (col. 7, lines 35-39), wherein the displaceable member's end and the valve shaft are in a spaced relationship (figure 5), a linear spring (11) engaging the valve shaft (via flange 7) that biases the valve member (3), a first flange (7), a valve seat (2), wherein the valve shaft (4) has a longitudinal axis (axis running vertically in figure 5), wherein the rotation axis (vertical axis in figure 5) is parallel to the longitudinal axis, wherein the displaceable member (41) has a disc-shaped member (portion that contacts the valve shaft has a circular face and therefore is the shape of a disc), wherein the spring (11) is between the valve member 93) and the actuator (34), a second flange member (54), and wherein the spring's send end contacts a base (adjacent the lead line for element 11 in figure 5) but lacks a the motor being a constant rate motor such as a synchronous motor. Lebkuchner teaches a method of operating a valve comprising the step of providing a constant rate synchronous motor (col. 5, lines 33-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the method of operating, closing and assembling a valve assembly of Miyake et al. by replacing the rotary motor with a rotary synchronous motor as taught by Lebkuchner in order for the motor to turn the actuator as a constant speed which reduced the effect on the flow of the fluid caused by the pressure differential between the two ports as the valve opens and closes.

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*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,224,034 (Kato et al.) disclose an EGR valve having a displaceable member and valve shaft space from one another.


U.S. Pat. No. 5,184,593 (Kabayashi) discloses an EGR valve having a rotary motor.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Fristoe Jr. whose telephone number is (571) 272-4926.


The examiner can normally be reached on Monday-Friday, 7: 00 a.m-4: 30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine R. Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John K. Fristoe Jr.  
Examiner  
Art Unit 3751

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11/25/05